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Practitioner's Docket No. 466-008195-US(PAR) ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Mika TARKIAINEN
Stephen WILLIAMS
Ari RIEKKI

WARNING: Patent must be applied for in the name(s) of all of the actual inventor(s). 37 CFR 1.41(a) and 1.53(b).

For (title): METHOD FOR THE TRANSMISSION OF MESSAGES

CERTIFICATION UNDER 37 C.F.R. 1.10*
(Express Mail label number is mandatory.)
(Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date August 21, 1998, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EL067095495US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Debra G. Conrad
(type or print name of person mailing paper)

Debra G. Conrad
Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

WARNING: Each paper or fee filed by "Express Mail" **must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).*
*"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.*

1. Type of Application

This new application is for a(n)

(check one applicable item below)

☒ Original (nonprovisional)

☐ Design

☐ Plant

WARNING: ***Do not*** *use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.*

WARNING: ***Do not*** *use this transmittal for the filing of a provisional application.*

NOTE: If one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.

☐ Divisional.

☐ Continuation.

☐ Continuation-in-part (C-I-P).

2. Benefit of Prior U.S. Application(s) (35 U.S.C. 119(e), 120, or 121)

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. 120, 121 or 365(c). (35 U.S.C. 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

WARNING: When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application ***must*** *be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3).*

☐ The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

3. Papers Enclosed That Are Required for Filing Date under 37 C.F.R. 1.53(b) (Regular) or 37 C.F.R. 1.153 (Design) Application

18 Pages of specification

2 Pages of claims

1 Pages of Abstract

5 Sheets of drawing

☐ formal

☐ informal

WARNING: ***DO NOT*** *submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. Comments on proposed new 37 CFR 1.84. Notice of March 9, 1988 (1990 O.G. 57-62).*

NOTE: "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page." 37 C.F.R. 1.84(c)).

(complete the following, if applicable)

☐ The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. 1.84(b).

4. Additional papers enclosed

☒ Preliminary Amendment

☒ Information Disclosure Statement (37 C.F.R. 1.98)

☒ Form PTO–1449 (PTO/SB/08A and 08B)

☒ Citations

☐ Declaration of Biological Deposit

☐ Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

☐ Authorization of Attorney(s) to Accept and Follow Instructions from Representative

☐ Special Comments

☐ Other

5. Declaration or oath

☒ Enclosed

Executed by

(check **all** *applicable boxes)*

☒ inventor(s).

☐ legal representative of inventor(s). 37 CFR 1.42 or 1.43.

☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.

☐ This is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. *See* item 13 below for fee.

☐ Not Enclosed.

WARNING: Where the filing is a completion in the U.S. of an International Application, but where a declaration is not available, or where the completion of the U.S. application contains subject matter in addition to the International Application, the application may be treated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.

☐ Application is made by a person authorized under 37 C.F.R. 1.41(c) on behalf of *all* the above named inventor(s).

(The declaration or oath, along with the surcharge required by 37 CFR 1.16(e) can be filed subsequently).

NOTE: It is important that all the correct inventor(s) are named for filing under 37 CFR 1.41(c) and 1.53(b).

☐ Showing that the filing is authorized.
(not required unless called into question. 37 CFR 1.41(d))

6. Inventorship Statement

WARNING: *If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the last claimed invention was made, should be submitted.*

The inventorship for all the claims in this application are:

☐ The same.

or

☐ Not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made,

☐ is submitted.

☐ will be submitted.

7. Language

NOTE: An application including a signed oath or declaration may be filed in a language other than English. A verified English translation of the non-English language application and the processing fee of $130.00 required by 37 CFR 1.17(k) is required to be filed with the application, or within such time as may be set by the Office. 37 CFR 1.52(d).

NOTE: A non-English oath or declaration in the form provided or approved by the PTO need not be translated. 37 CFR 1.69(b).

☒ English

☐ Non-English

☐ The attached translation is a verified translation. 37 C.F.R. 1.52(d).

8. Assignment

☒ An assignment of the invention to Nokia Mobile Phones Limited

☒ is attached. A separate ☒ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.

☐ will follow.

NOTE: "If an assignment is submitted with a new application, send two separate letters-one for the application and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).

WARNING: A newly executed "CERTIFICATE UNDER 37 CFR 3.73(b)" must be filed when a continuation-in-part application is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.

9. Certified Copy

Certified copy(ies) of application(s)

Country	Appln. No.	Filed
Finland	973544	August 28, 1997
Country	Appln. No.	Filed
Country	Appln. No.	Filed

from which priority is claimed

☒ is (are) attached.

☐ will follow.

NOTE. The foreign application forming the basis for the claim for priority must be referred to in the oath or declaration. 37 CFR 1.55(a) and 1.63.

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. 120 is itself entitled to priority from a prior foreign application, then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

10. Fee Calculation (37 C.F.R. 1.16)

A. ☒ Regular application

CLAIMS AS FILED			
Number filed	Number Extra	Rate	Basic Fee 37 C.F.R. 1.16(a) $790.00
Total Claims (37 CFR 1.16(c)) 8 − 20 = 0	×	$ 22.00	
Independent Claims (37 CFR 1.16(b)) 2 − 3 = 0	×	$ 82.00	
Multiple dependent claim(s), if any (37 CFR 1.16(d))	+	$270.00	

☐ Amendment cancelling extra claims is enclosed.

☒ Amendment deleting multiple-dependencies is enclosed.

☐ Fee for extra claims is not being paid at this time.

NOTE: If the fees for extra claims are not paid on filing they must be paid or the claims cancelled by amendment, prior to the expiration of the time period set for response by the Patent and Trademark Office in any notice of fee deficiency. 37 CFR 1.16(d).

Filing Fee Calculation $790.00

B. ☐ Design application
($330.00—37 CFR 1.16(f))

Filing Fee Calculation $_____

C. ☐ Plant application
($540.00—37 CFR 1.16(g))

Filing fee calculation $_____

11. Small Entity Statement(s)

☐ Verified Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is (are) attached.

WARNING: "Status as a small entity in one application or patent does not affect any other application or patent, including applications or patents which are directly or indirectly dependent upon the application or patent in which the status has been established. A nonprovisional application claiming benefit under 35 U.S.C. 119(e), 120, 121 or 365(c) of a prior application may rely on a verified statement filed in the prior application if the nonprovisional application includes a reference to a verified statement in the prior application or includes a copy of the verified statement filed in the prior application if status as a small entity is still proper and desired." 37 C.F.R. § 1.28(a).

(complete the following, if applicable)

☐ Status as a small entity was claimed in prior application

_____ / _____, filed on _____, from which benefit is being claimed for this application under:

35 U.S.C. ☐ 119(e),
☐ 120,
☐ 121,
☐ 365(c),

and which status as a small entity is still proper and desired.

☐ A copy of the verified statement in the prior application is included.

Filing Fee Calculation (50% of **A**, **B** or **C** above)

$_____

NOTE: Any excess of the full fee paid will be refunded if a verified statement and a refund request are filed within 2 months of the date of timely payment of a full fee. The two-month period is not extendable under § 1.136. 37 CFR 1.28(a).

12. Request for International-Type Search (37 C.F.R. 1.104(d))

(complete, if applicable)

☐ Please prepare an international-type search report for this application at the time when national examination on the merits takes place.

13. **Fee Payment Being Made at This Time**

☐ Not Enclosed

☐ No filing fee is to be paid at this time.
(This and the surcharge required by 37 C.F.R. 1.16(e) can be paid subsequently.)

☒ Enclosed

☒ Filing fee $ 790.00

☒ Recording assignment
($40.00; 37 C.F.R. 1.21(h))
(See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION".) $ 40.00

☐ Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached
($130.00; 37 C.F.R. 1.47 and 1.17(h)) $ _____

☐ For processing an application with a specification in a non-English language
($130.00; 37 C.F.R. 1.52(d) and 1.17(k)) $ _____

☐ Processing and retention fee
($130.00; 37 C.F.R. 1.53(d) and 1.21(l)) $ _____

☐ Fee for international-type search report
($40.00; 37 C.F.R. 1.21(e)) $ _____

NOTE: 37 CFR 1.21(l) establishes a fee for processing and retaining any application that is abandoned for failing to complete the application pursuant to 37 CFR 1.53(d) and this, as well as the changes to 37 CFR 1.53 and 1.78, indicate that in order to obtain the benefit of a prior U.S. application, either the basic filing fee must be paid, or the processing and retention fee of § 1.21(l) must be paid, within 1 year from notification under § 53(d).

Total fees enclosed $ 830.00

14. **Method of Payment of Fees**

☒ Check in the amount of $ 830.00

☐ Charge Account No. _____ in the amount of $_____.

A duplicate of this transmittal is attached.

NOTE: Fees should be itemized in such a manner that it is clear for which purpose the fees are paid. 37 CFR 1.22(b).

15. Authorization to Charge Additional Fees

WARNING: If no fees are to be paid on filing, the following items should not be completed.

WARNING: Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized.

☒ The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 16-1350 :

☒ 37 C.F.R. 1.16(a), (f) or (g) (filing fees)

☒ 37 C.F.R. 1.16(b), (c) and (d) (presentation of extra claims)

NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

☒ 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)

☒ 37 C.F.R. 1.17 (application processing fees)

WARNING: While 37 CFR 1.17(a), (b), (c) and (d) deal with extensions of time under § 1.136(a), this authorization should be made only with the knowledge that: "Submission of the appropriate extension fee under 37 C.F.R. 1.136(a) is to no avail unless a request or petition for extension is filed." (Emphasis added). Notice of November 5, 1985 (1060 O.G. 27).

☐ 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

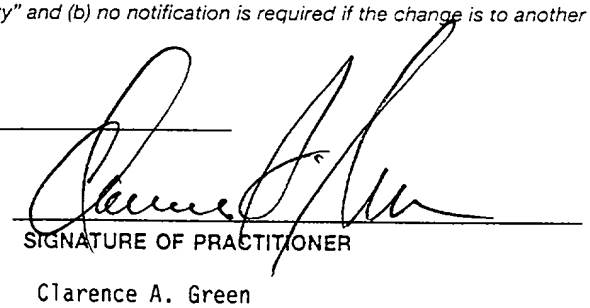
NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b).

NOTE: 37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . issue fee." From the wording of 37 CFR 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

16. Instructions as to Overpayment

☒ Credit Account No. 16-1350

☐ Refund



SIGNATURE OF PRACTITIONER

Reg. No. 24,622

Clarence A. Green

(type or print name of attorney)

Tel. No. (203) 259-1800

PERMAN & GREEN, LLP

P.O. Address

Customer No.

425 Post Road, Fairfield, CT 06430

☐ **Incorporation by reference of added pages**

(check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED)

☐ Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed

Number of pages added _____

☐ Plus Added Pages for Papers Referred to in Item 4 Above

Number of pages added _____

☐ Plus "Assignment Cover Letter Accompanying New Application"

Number of pages added _____

☒ **Statement Where No Further Pages Added**

(if no further pages form a part of this Transmittal, then end this Transmittal with this page and check the following item)

☒ This transmittal ends with this page.

Method for the transmission of messages

The present invention relates to a method for the as presented in the introductory part of the appended claim 1. The present invention relates also to a system as presented in the introductory part of the appended claim 6.

Message service refers in this context *e.g.* to short message service (SMS) as well as to paging. In a corresponding manner, a system for the transmission of messages refers to a system for applying a message service, preferably a mobile communication system. In the publication TSK 19: "Matkaviestinsanasto - Vocabulary of Mobile Communications" by Tekniikan Sanastokeskus r.y. (ISBN 951-95567-9-6), a mobile communication system is defined as a data communication system formed by a mobile communication network and mobile stations. Mobile communication systems include a cellular system, a paging system as well as a mobile telephone system. A cellular system, such as a GSM system, is a mobile communication system using a cellular network. A paging system is a simplex mobile communication system intended for paging. A mobile telephone system is a duplex mobile communication system intended primarily for the transmission of speech. A mobile station refers in this context to a mobile station and to a paging receiver applicable for the reception of messages transmitted by a message service.

The user has for example two mobile stations which in this description, for the sake of clarity, are called a primary mobile station and a secondary mobile station. The primary mobile station refers to the mobile station primarily used by the user. Accordingly, the secondary mobile station refers to the mobile station used less frequently by the user. These mobile stations can be substantially identical with respect to the properties, or the primary mobile station has usually more extensive properties than the secondary mobile station. The primary mobile station has for example the telefax functionality, the electronic mail functionality and a calendar function. The secondary mobile station, instead, may be lighter and more compact, and it may thus be more convenient to carry along.

The transmission of a message in a message transmission system is typically conducted in a way that the sender of the message writes a text message *e.g.* with a mobile station or with a computer in communication with a telecommunication network, and defines the message a receiver address. The receiver address is *e.g.* a code identifying the mobile station of the recipient of the message, such as a telephone number. The message transmission system comprises means for receiving the message to be transmitted from the sender and means for retrieving the address of the recipient of the message and for sending the message to the mobile station of the recipient.

A message service centre is *e.g.* in the GSM system advantageously a short message service centre (SM-SC), a paging network controller (PNC) or a wireless messaging switch (WMS).

Also, the transmitted message can be intended to be received by several recipients, wherein a so-called group transmission is involved. Thus the transmission includes information about the group of recipients, wherein the message transmission system has the identification data of the mobile stations belonging to the group and the message is transmitted to all the mobile stations of this group. A group transmission can also be sent in a way that the identification data of the mobile stations belonging to the group is stored in the mobile station of the sender, wherein the mobile station of the sender generates the message to be transmitted to each mobile station in the group and transmits each message separately. This alternative does not require that the message transmission system has group transmission handling properties and group data storage capacity.

One known message transmission system is paging, wherein the message to be transmitted can be given *e.g.* by means of a telecommunication terminal connected with a landline or wireless telecommunication network. The message is transmitted to a paging network controller equipped with means (a modulator an a radio transmitter) for transmitting the message via the radio channel to the paging receiver. The paging receiver has a radio receiver and a demodulator for demodulating the message. Furthermore, the paging device comprises means for

presenting the message to the recipient. The message can be given for example as a text message or a sound message.

Another message transmission system is the short message service of the GSM mobile communication network. Thus the message to be transmitted can be formed as a short message *e.g.* with a mobile station or a data processor in communication with a telecommunication network. The short message is provided with the identification data of the mobile station of the recipient, such as a telephone number. On the basis of the identification data, the short message is transmitted to the mobile station of the recipient. The short message service centre SM-SC controls the transmission of short messages in the GSM mobile communication network. The mobile station of the recipient receives the short message and informs the recipient of the reception of the message. Thus the recipient can *e.g.* by means of the menu functions read the received short message. The transmitting and receiving mobile stations can also belong to mobile communication networks provided by different teleoperators, and they can also be mobile stations of different mobile communication systems, if the properties for transmission of short messages are arranged between these mobile communication systems. The receiving mobile station can also be a paging device. This is prior art, so that its more detailed presentation will be rendered unnecessary in this context.

Systems have been developed for reminding the user at a given time of the beginning of an event. In this description, events of this kind are called calendar events. These calendar events can include a meeting, a special day, an appointment, a trip, or an exhibition. The user has a calendar application at his or her availability, for example a computer calendar program, or a calendar application of a personal digital assistant (PDA) or a mobile station. The calendar application gives also a possibility to set an alarm of the beginning of a certain event. This alarm can be set at the time of beginning of the event or possibly also some time before the beginning of this event, so that the user will have some time to be prepared for the event. This is a very useful function particularly for reminding of the beginning of meetings. The alarm can be a sound signal or it can also be a text message that is displayed on the display device of the mobile station.

US Patent 5,416,473 discloses one such calendar-controlled selective message system and a method for its use. The system comprises an electronic data processor with means for transmitting a message to a paging device, means for writing the message, means for selecting the address of the paging device, and means for transmitting the message at a predetermined moment of time to at least one selected paging receiver. The data processor used can be for example a computer with a modem for connecting the computer into data communication with a telecommunication network, such as a landline telecommunication network. The memory means of the data processor contains a stored list on the identification data of paging devices and a real-time calendar in which the user can enter the events in advance. The software of the data processor contains an application program which monitors the alarm times of events entered in the calendar substantially in real time and transmits a message at the alarm time entered in the event. The message is transmitted to the selected paging device. The paging device can also be the user's own paging device, wherein the user can remind him- or herself of important events. However, a disadvantage of this system is *e.g.* the fact that the recipient of the message must carry along the exactly correct paging device to be reached. On the other hand, the recipient may have several devices suitable for receiving this kind of messages, such as mobile stations and paging devices, wherein the sender of the message may not necessarily know which one of these devices the message should be addressed to in order to catch the recipient in time.

In telephone exchanges, the call transmission function is known, *i.e.* it is possible to transmit calls incoming to a certain telephone to another telephone selected in advance. The call transmission is set by entering the transmission command from the phone to which the incoming calls are intended to be transferred. In connection with the transmission command, the number of the telephone to which are transferred, is entered. The telephone can be a phone of an ordinary landline telecommunication network or also a mobile station connected with a mobile communication network. If the calls coming in a mobile station are directed to be transferred to another telecommunication terminal, also the messages coming in this mobile station are transferred to the se-

lected telecommunication terminal. However, call transmission is not a useful function *e.g.* in situations in which one wishes to transfer the calls and messages coming in a certain telecommunication terminal to different telecommunication terminals, or to transfer only incoming messages. In systems of currently known technology, this requires that the sender of the message has, at the moment of transmission, knowledge of the number of the mobile station used by the recipient for receiving messages at that time. Consequently, the sender must select the number.

One purpose of the present invention is to provide an improved method and apparatus for the transmission of messages addressed to the primary mobile station of a recipient to the secondary mobile station of the recipient. The method of the invention is characterized in what will be presented in the characterizing part of the appended claim 1. The system of the invention is characterized in what will be presented in the characterizing part of the appended claim 6. The invention is based on the idea that the secondary mobile station of the recipient can be activated to receive the messages related to calendar events and transmitted to the primary mobile station, wherein the messages are directed to the active mobile station of the recipient while maintaining the possibility to receive other calls with the primary receiver.

The invention can be applied particularly in data communication systems which have a possibility to transmit short messages to a terminal belonging to the data communication system on the basis of the identification of the terminal, such as a telephone number. Many mobile communication systems have this option. The present invention can be advantageously applied in mobile communication networks which provide a short message service (SMS) or paging.

The present invention gives significant advantages to the method and systems of prior art. The user does not always need to carry along his or her primary mobile station but he or she can, when necessary, take along a possibly smaller and lighter mobile station in situations when he or she will not need all the properties of the primary mobile station. The user may also have several mobile stations which can be simultaneously in use *e.g.* with different family members, and the user can still di-

rect the important messages to him or her to the mobile station carried along, although this mobile station were not his or her primary mobile station. Thus it will also be possible to direct calls and messages to different mobile stations, if necessary. Furthermore, the user can, irrespective of the message transfer function, call the primary mobile station carried by another person. Other advantages of the invention will be presented in the appended dependent claims.

In the following, the invention will be described in more detail with reference to the appended drawings, in which

Fig. 1a shows the system according to an advantageous embodiment of the invention in a reduced skeleton diagram,

Fig. 1b is a reduced block diagram of a mobile station that can be used in the system according to an advantageous embodiment of the invention,

Fig. 2 is a flow chart showing the set-up of a message based on a calendar event,

Fig. 3 is a flow chart showing the transmission of a message based on a calendar event, and

Fig. 4 is a flow chart showing the reception of a message based on a calendar event.

The invention will be described in the following by using the GSM mobile communication system as an example of the message transmission system. However, the invention will not be limited solely to this mobile communication system but the invention can be applied also in other mobile communication systems providing the possibility for transmitting addressed messages. The mobile communication system can be simplex or duplex.

As known, a GSM mobile communication network 1, 1' consists of mobile services switching centres MSC and of base station systems BSS, BSS'. A base station system consists of a base station BS and a base

station controller BSC. Each base station system BSS, BSS' is controlled by one mobile services switching centre MSC. Mobile services switching centres MSC communicate with each other, wherein calls and other signalling can be transmitted within the mobile communication network 1, 1' as well as between the mobile communication network 1, 1' and a landline telecommunication network PSTN or another mobile communication network 1, 1'. In the same geographical area, there can also be several mobile communication networks 1, 1', usually provided by different teleoperators, even mobile communication networks complying to the same standard. For example in Finland, there are presently two GSM mobile communication networks, one provided by Radiolinja and the other provided by Tele. The mobile services switching centre MSC has a home location register HLR and a visitor location register VLR. The home location register HLR is a database of the mobile communication network containing the basic data of the mobile station subscribers registered in the network. The home location register HLR contains *e.g.* the international mobile subscriber identity IMSI, the mobile subscriber international ISDN number MSISDN, as well as data related to the services available to the subscriber. The visitor location register VLR is a database of the mobile communication network containing the data required of the mobile subscribers within the area of the mobile communication network at each time for the transmission of calls. The visitor location register VLR is used *e.g.* for the control of the mobility of the mobile station, wherein calls and messages can be directed to the correct mobile station 2, 3, 4, 4' also in a situation where the mobile station is in the area of a different mobile communication network than in which the mobile station is registered. This situation comes also for example when the mobile station is used abroad.

With GSM mobile stations, each mobile subscriber must have at least one subscriber identity module (SIM) card. This SIM card contains the identification data of the mobile subscriber, such as the code and telephone number of the mobile subscriber. Thus by using these identification data, the messages and calls can be directed to the correct mobile station 3, 4, 4'. The SIM card can also be moved to another mobile station, if necessary, wherein also the calls are transmitted to this other mobile station.

The use of a SIM card requires usually that a PIN code is entered at the stage when the mobile station is turned on. This PIN code can be changed by the mobile subscriber, and the code is intended for preventing misuse of the SIM card for example if the SIM card is lost.

Figure 1a is a reduced skeleton diagram showing the system for the transmission of messages according to a first advantageous embodiment of the invention. The message transmission system comprises *e.g.* a mobile communication network 1, which is this case is the GSM mobile communication network, the mobile station 2 of the sender, the primary mobile station 3 of at least one recipient, as well as one or several secondary mobile stations 4, 4' of said at least one recipient.

The recipient may also have a data computing device 16 such as a PC, laptop etc. The data computing device 16 can include a calendar application which can be used to generate calendar events. The data computing device 16 can also include an email application to be used to send and receive emails. The calendar event and received emails can be informed to the recipient prefarably by the display device 17, and/or by the audio means (not shown). The data computing device 16 can be connected to the landline telecommunication network PSTN by a modem (not shown), to an integrated services digital network (ISDN, not shown) by an ISDN adapter (not shown), or to the mobile communication network 1, 1' for example by a radio card 18.

Figure 1b is a reduced block diagram showing a mobile station 2, 3, 4 available in a system according to an advantageous embodiment of the invention, as an example. The block diagram shows primarily the blocks which are important for the description of this invention. It is obvious that the mobile station 2 of the sender, the primary mobile station 3 of the recipient, and the secondary mobile station 4, 4' of the recipient do not need to be similar to each other. The control unit 5 comprises *e.g.* a microcontroller unit 5a (MCU) and an application specific integrated circuit 5b (ASIC). Further, the mobile station 2 comprises a keypad 6, a display 7, an earphone 8, a microphone 11, memory means 9 which contains *e.g.* a non-volatile read-only memory for the storage of programs and a random access memory for storing data during the opera-

tion of the mobile station 2, 3, 4, 4'. Moreover, the mobile station comprises a real-time clock 10 which can be a separate micro circuit applicable for this purpose, or it can also be implemented with a program, wherein the mobile station 2, 3, 4, 4' receives information of real time *e.g.* from the mobile communication network 1. The mobile station 2, 3, 4, 4' comprises further a radio element 12 equipped with means for setting up a connection and for transmitting data between the mobile station and the mobile communication network. Figure 1b shows also a SIM card 14 as well as means 15 for connecting the SIM card to the mobile station 2, 3, 4, 4'.

Figure 2 is a reduced block diagram showing the stages of setting up and storing a message in a system according to the first advantageous embodiment of the invention. The message is set up *e.g.* with a calendar application (201) which is installed in the mobile station 2, data processor or a corresponding message set-up device of the sender. The calendar application is an application program arranged to be run *e.g.* in the control unit 5 of the mobile station, as is known.

The sender can write the message to be transmitted by using the keypad 6. The control unit 5 recognizes the entries through the buttons and stores the message to be written in a message buffer or the like, from which the message can later be retrieved for processing. This is prior art to an expert in the field, and can be implemented by several different methods, wherein its description in more detail will not be necessary in this context. Having written the message (block 202), *e.g.* "Meeting", the sender selects the identification data, advantageously the telephone number, of the primary mobile station 3 of at least one recipient of the message (block 203). When necessary, it is possible to select also several recipients (block 204), wherein the identification data of the primary mobile station 3 of each selected recipient is defined.

Next, the sender uses the keypad 6 for entering the date and time for the transmission of the message in the calendar application (block 205). The default value for the date of transmission is advantageously the same date, wherein it will not be necessary to enter the date of transmission separately but the time will be sufficient in the message to be sent on the date of writing the message. Further, the

number of retransmission times can be determined for the message (block 206), *i.e.* how many attempts will be made to resend the message after a failed transmission. This will be presented below in this description, in connection with the description of the flow chart of Fig. 3.

Further, the type of the message is defined (block 207); this is advantageously a short message, but it can also be facsimile, electronic mail, audio call, data call, or another message type known as such. The type of the message indicates in which form the message will be transmitted to the recipient/recipients. In this description, primarily the transmission of a short message will be described in more detail, but the corresponding principles can be applied also to the other above-mentioned message types in which the message can be addressed to the correct recipient on the basis of identification data, advantageously a teleterminal number (telephone number).

After the sender has entered all the data required for the setting of the message in the calendar application, the message and its settings are stored (block 208). The storing is conducted preferably in the memory means 9 of the telecommunication terminal of the sender. After the storing, the message is waiting for the time of transmission set for the message (block 209).

If necessary, the recipient can activate his or her secondary mobile station 4, 4', which can also be a GSM mobile station, as the receiver of messages transmitted to the primary mobile station 3. The user has thus at least two SIM cards 14 or the like, wherein one SIM card 14 is installed in at least one secondary mobile station 4. Also the primary mobile station 3 and possible other secondary mobile stations 4, 4' can have a SIM card 14 installed in them. However, the recipient can have only one mobile station 3, 4, 4' at a time activated as the receiver of messages transmitted to the primary mobile station 3 of the recipient in question. Nevertheless, this activation does not prevent from receiving messages also with the other mobile stations 3, 4, 4', if the sender of the messages has given the telephone number of this mobile station 3, 4, 4' as the address.

Next, the transmission of the message will be described, as presented in a flow chart in Fig. 3.

The mobile station 2 of the sender, *e.g.* a calendar application program (block 301), examines the settings of messages to be transmitted according to the entries in the calendar substantially in real time. The application program compares time information from a real time clock 10 with the transmission time information of each message in a manner known as such (block 302). When the comparison shows that a pre-set transmission time is equal to the time indicated by the real time clock, the settings of the message in question are retrieved from the memory means 9 (block 303). On the basis of the identification data of the receiver defined in the message, a query message is set up in a mobile communication network 1 in order to obtain network information on the primary mobile station 3 of the said recipient, such as the telephone number and the operational state (block 304). On the basis of the operational state, it can be deduced (block 305) whether the mobile station 3 in question is activated for the reception of messages at the time.

If the operational state data indicates that the primary mobile station 3 of the recipient is activated as a mobile station receiving messages, the telephone number of this primary mobile station 3 is set as the address of the message to be transmitted, and the message is transmitted (block 306).

If the operational state data indicates that the primary mobile station 3 of the recipient is not activated as a mobile station receiving messages at the time, the mobile communication network 1 is queried whether the recipient has possibly other, secondary mobile stations 4, 4' available (block 307). The reply from the mobile communication network 1 is examined in block 308. If a secondary mobile station 4, 4' of the recipient is found in the mobile communication network 1 to be examined, it is further examined whether this one is activated to receive messages. If it is, the telephone number of this secondary mobile station 4, 4', given in the reply message from the mobile communication network 1, is set in block 309 as the address for the message to be transmitted. After this, the operation goes on again from block 306.

If this secondary mobile station 4, 4' is not activated to receive messages, it is examined in block 310 whether the recipient has still another secondary mobile station 4, 4' suitable for receiving messages. If no other mobile stations of the recipient are found, it is possible to try to make a search also in another mobile communication network 1'. If there are no other mobile stations, the identification data of the primary mobile station 3 is used as the address of the message (block 311), and the operation goes on from block 306 by transmission of the message.

If the network information contains data of another secondary mobile station 4, 4' of the user, the operation goes on in block 307, in which a new query message is generated to be transmitted to the mobile communication network 1, 1' to find out the network information of this secondary mobile station 4, 4'.

We shall still describe how the message is received in the mobile station of the recipient and how the recipient will be informed. This is presented in a flow chart in Fig. 4. The activated secondary mobile station of the recipient runs a message processing application program 401 which is implemented preferably in the application software of the control unit 5. The message is received *e.g.* in a message buffer (not shown) which is implemented preferably in the random-access memory of in the memory means 9 (block 402). The date and time of the event to be communicated, as well as the subject of the event (*e.g.* "Meeting") and possibly agenda, names of participants *etc.* are examined from the message (block 403). On the basis of the date and time, the corresponding data of the event can be entered in the calendar application in the mobile station of the recipient (block 404). The received message is formed into a message, *e.g.* a text message or an icon on the display 7 of the mobile station and/or an audio message in the ear piece 8 of the mobile station (block 405).

It is often important for the sender to be informed whether the message has come through (block 312 in Fig. 3). This can be arranged in a mobile station system *e.g.* in a way that the short message service centre SM-SC sends an acknowledgement message to the mobile station of the sender after the message has been transmitted to the mobile sta-

tion 3, 4, 4' of the recipient. The acknowledgement message can be transmitted *e.g.* via a signalling channel. How this is carried out in practice, depends *e.g.* on the structure of the mobile communication network to be used at a time and is prior art to an expert in the field. If the message cannot be transmitted to the mobile station 3, 4, 4' of the recipient, it is possible to try to send the message again if retransmission has been set into use (block 313).

In the following, a method according to an advantageous embodiment of the invention for activating a secondary mobile station 4, 4' for receiving messages addressed to a primary mobile station 3 with the secondary mobile station 4, 4' will be described in a system shown in Fig. 1. Activation is conducted *e.g.* with the menu functions of the secondary mobile station 4, 4', or with a certain button function, for example by pressing the "*" button three times and possibly entering also a password to prevent unauthorized activation attempts for example in case of loss of the mobile station. The way of conducting the activation function is not essential for the application of this invention but it can vary in different applications and even in different mobile stations. After entering the activation command, information on this is transmitted to the mobile communication network 1, 1' in which the mobile subscriber's SIM card 14 installed in the mobile station in question is registered. In the mobile communication network 1, 1', the activation information is stored for example in the database of the mobile services switching centre, in the information on the primary mobile station 3 of the subscriber in question, such as in the home location register HLR. Further, said mobile communication network 1, 1' can transmit the activation data to other mobile communication networks in which said mobile subscriber has SIM cards registered. Thus all the home location registers of the subscriber are aware of which mobile station of the subscriber is active at the time.

The mobile subscriber can also store all the identification data of his or her SIM cards (mobile station telephone numbers) in the memory means 9 of his or her mobile stations, wherein the activation takes place *e.g.* in the following way. The mobile station to be activated sends an activation message informing the identification data of the mobile station to be activated, to the mobile communication network 1, 1' of the

teleoperator corresponding to the SIM card in question. Next, the mobile station reads from the storing means 9 the identification data of the other SIM cards of the mobile subscriber and transmits the activation data to the mobile communication networks 1, 1' of teleoperators corresponding to the other SIM cards respectively, wherein also these mobile communication networks 1, 1' have information on the mobile station active at the time.

Activation can also be automatic in situations in which the mobile subscriber has no other mobile stations switched on at the time. Thus all the messages transmitted to the primary mobile station 3 of the said subscriber can be addressed to this mobile station switched on. This automatic activation can be implemented advantageously in the mobile communication network 1, 1', wherein the mobile communication network examines *e.g.* in the home location register HLR whether the subscriber has other mobile stations switched on. If the subscriber in question has no other mobile stations switched on at the time, the mobile communication network activates this mobile station.

In the following, an advantageous example will be given on the structure of an activation message. The message is based on the separator ciphers * and # commonly used in digital telecommunication networks. The message has the form *#[code]#[user identification]#[A subscriber identification]#[operator identification]#[password]#, in which [code] indicates a preferably numerical activation code, *e.g.* 123; [user identification] indicates a code identifying the mobile subscriber, *e.g.* 0987654321; [A subscriber identification] indicates the telephone number to be activated, *e.g.* +358505678901; [operator identification] is the identification of the teleoperator providing the mobile communication network to which the message will be transmitted, *e.g.* 8353; and [password] is a password defined by the user, *e.g.* 5432. The A subscriber identification can be read *e.g.* from the SIM card 14, or the mobile subscriber can enter it in the message by him- or herself. Thus, the example message is:

*#123#0987654321#+358505678901#8353#5432#.

In a corresponding way, an example is given of a query message as presented in the flow chart of Fig. 3, which will be transmitted in

block 306 to the mobile communication network 1, 1'. The example query has the form *#[query code]#, which is the code for a query, *e.g.* 124. Thus the example message is:
*#124#.

In response, the mobile communication network 1, 1' transmits *e.g.* an active telephone number, for example +358055544332. This telephone number is not necessary displayed to the sender who made the query because some persons have secret telephone numbers which they do not want to make public. The sending mobile station 2 uses the telephone number thus received in the message to be transmitted, as presented above in this description.

The invention can be applied also in group transmissions for example in the following way: The sender of the message has entered in the calendar application of his or her own mobile station 2 the time of a meeting and a message which will be transmitted to the participants of the meeting advantageously some time before the beginning of the meeting. Thus in addition to the time of the message, the persons are defined to whom the message is to be delivered. The sender knows the telephone numbers of the primary mobile stations 3 of the persons to whom the message is addressed. The data are entered either directly with the keyboard or they can have been stored in advance *e.g.* in the so-called telephone directory memory of the mobile station 2 or the SIM card 14, as is known. The sender can also have made groups of persons, wherein a certain group is a collection of the telephone numbers of the persons belonging to this group. Such groups may include *e.g.* workers in a certain project. Thus the sender can select the group in question, wherein the primary mobile station 3 of each group is identified with the information of the group, this information being used at the stage of transmitting the message. At the time set for transmission of the message, the mobile station 2 of the sender generates one message to be transmitted to the mobile station 3 of each person belonging to the selected group and conducts transmission of each message, as presented above in connection with the description of the flow chart of Fig. 3.

Consequently, any person can have his or her secondary mobile station 4, 4' activated, wherein the message coming in the primary mobile station of this person is directed to this secondary mobile station 4, 4' according to a corresponding principle as presented above. In this way, the accessibility of the users is improved, and the sender does not need to have knowledge of all the possible mobile station identifications that each user can have available. Thus it is sufficient for the sender to define one identification, wherein the system according to the invention takes care of directing the message to the correct, active mobile station 3, 4, 4'.

In the following, further another advantageous embodiment of the present invention will be described. The user has defined a calendar event, for example an appointment or a meeting by using a calendar application of a data computing device 16 such as a PC, laptop, PDA, or communicating device such as a mobile station. The user has defined at least the alarm time and the message. The calendar application displays the message at the given time on the display of the device. Normally, if the user is near the device, he or she will read the message. However, if the user is not nearby at the alarm time, the alarm will not be acknowledged by the user. The calendar application begins to measure time which has elapsed from the alarm time. There is defined a delay, for example 30 s, after which the calendar application determines that the user is not nearby if the calendar event remains unacknowledged. Next, the calendar application begins to forward the calendar event to another device, for example to the primary mobile station 3 of the user. From now on, the method of this advantegous embodiment of the invention will proceed as described earlier in this application so that the calendar event will be forwarded to the activated mobile station 3, 4, 4' of the user.

The user can define a delay time that the calendar application waits for an acknowledgement before it begins to forward the calendar event. The delay time can be measured for example by using a timer (not shown) of the data computing means 16 or by an application program, which is known as such. This delay can also have a default value. Moreover, the user can define the primary mobile station 3 and one or more secondary mobile stations 4, 4'.

Furthermore, the invention can be applied in a way that after the message which is sent for example from the mobile station 2 of the sender is received at the user's data processor, PDA, mobile station, or the like, the device that received the message starts a time-out for monitoring if the user will read the message within a prescribed time. If the user does not read the message within the predetermined time, the device will forward the message further to the primary mobile station 3, as presented above in this description. By this method, the accessibility of a person can be improved further in various situations. The user does not need to set forwarded transmission of messages separately, but they are forwarded automatically if they are not read. Moreover, the user does not need to break up the forwarded transmission when returning to the vicinity of the data processor, because he/she has the time of the predetermined delay to read the message. Further, the user does not need to maintain calendar functions in several locations, but it is sufficient that the user has appointments and other events recorded in one location. Thus, the system according to an advantageous embodiment of the invention will take care of the transmission of messages to the location of the user at each time.

The invention can also be applied in a way that instead of the secondary mobile station 4, 4', the recipient directs the messages *e.g.* to a telecommunication terminal 13 of a landline telecommunication network PSTN. Thus the mobile station of the sender converts the text-form message to be transmitted *e.g.* to a speech message which is transmitted to the said telecommunication terminal 13. The message can also be converted to a dual tone multiple frequency (DTMF) signal which can be transmitted also through the landline telecommunication network PSTN to the landline telecommunication terminal 13 of the recipient. The message to be transmitted can also be a telecopy transmission, wherein the transmission is directed to a telecommunication terminal of the recipient that is suitable for the reception of telecopies and is active at the time.

Turning off of activation takes place *e.g.* in a situation that an activated mobile station is turned off. Thus the messages remain preferably waiting in the system, *e.g.* in the message service centre, until the user

turns on this mobile station again or activates another mobile station available.

The invention is not limited solely to the examples presented above but it can be modified within the scope of the appended claims.

Claims:

1. Method for the transmission of messages by using a message service to the mobile station of a recipient, who uses at least a primary mobile station (3), in which there is at least the possibility to receive calls and messages, and at least one secondary mobile station (4, 4'), in which there is at least the possibility to receive messages, **characterized** in that the messages addressed to the primary mobile station (3) can be directed to any of the secondary mobile stations (4, 4') of the recipient, irrespective of calls.

2. Method according to claim 1, **characterized** in that the secondary mobile station (4, 4') of the recipient can be activated as the receiver of messages to be transmitted to the primary mobile station (3), wherein in the method the messages addressed to the primary mobile station (3) are directed to an activated secondary mobile station (4, 4').

3. Method according to claim 1 or 2, **characterized** in that the messages are generated on the basis of calendar events.

4. Method according to any of the claims 1 to 3, **characterized** in that the activation is conducted from the mobile station (4, 4') to be activated.

5. Method according to any of the claims 1 to 4, where a data computing device (16) of the recipient is used for informing of a received message to the recipient and to acknowledge the received message, **characterized** in that the message is first directed to the data computing device (16) and if the message is not acknowledged at a determined time the message is forwarded to the activated mobile station (3, 4, 4').

6. System for the transmission of messages from a sender to a recipient, who uses at least a primary mobile station (3) comprising at least means for receiving calls and means for receiving messages, and at least one secondary mobile station (4, 4') comprising at least means for receiving messages, **characterized** in that the system comprises means for activating the secondary mobile station (4, 4') of the recipient

to receive messages addressed to the primary mobile station (3), and means for directing messages addressed to the primary mobile station (3) to the secondary mobile station (4, 4').

7. System according to claim 6, **characterized** in that the messages has been generated on the basis of calendar events.

8. System according to claim 6 or 7, **characterized** in that the system comprises also:

- a data computing device (16), which comprises means (18) for receiving a message and means (17) for informing of the received message,
- means (16) for measuring time, and
- means (16, 18) for forwarding the received message to the activated mobile station (3, 4, 4') of the recipient.

(57) Abstract

The invention relates to a method for the transmission of messages by using a message service to a recipient who uses at least a primary mobile station (3), in which there is at least the possibility to receive calls and messages, and at least one secondary mobile station (4, 4'), in which there is at least the possibility to receive messages. The messages addressed to the primary mobile station (3) can be directed to any of the secondary mobile stations (4, 4') of the recipient, irrespective of calls.

Fig. 1a

12523

Attorney's Docket No. _____ ***PATENT***

COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION OR C-I-P)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is of the following type:

(check one applicable item below)

- ☒ original.
- ☐ design.
- ☐ supplemental.

NOTE: If the declaration is for an International Application being filed as a divisional, continuation or continuation-in-part application, do not check next item; check appropriate one of last three items.

- ☐ national stage of PCT.

NOTE: If one of the following 3 items apply, then complete and also attach ADDED PAGES FOR DIVISIONAL, CONTINUATION OR C-I-P.

- ☐ divisional.
- ☐ continuation.
- ☐ continuation-in-part (C-I-P).

INVENTORSHIP IDENTIFICATION

WARNING: *If the inventors are each not the inventors of all the claims, an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.*

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor *(if only one name is listed below)* or an original, first and joint inventor *(if plural names are listed below)* of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

METHOD FOR THE TRANSMISSION OF MESSAGES ,

SPECIFICATION IDENTIFICATION

the specification of which:

(complete (a), (b) or (c))

(a) ☒ is attached hereto.

(b) ☐ was filed on _____, as ☐ Serial No. 0 /_____ or ☐ Express Mail No., as Serial No. not yet known _____ and was amended on _____ *(if applicable)*.

NOTE: Amendments filed after the original papers are deposited with the PTO that contain new matter are not accorded a filing date by being referred to in the declaration. Accordingly, the amendments involved are those filed with the application papers or, in the case of a supplemental declaration, are those amendments claiming matter not encompassed in the original statement of invention or claims. See 37 CFR 1.67.

(c) ☐ was described and claimed in PCT International Application No. _____, filed on _____ and as amended under PCT Article 19 on _____ *(if any)*.

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56,

(also check the following items, if desired)

☐ and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and

☐ in compliance with this duty, there is attached an information disclosure statement, in accordance with 37 CFR 1.98.

PRIORITY CLAIM (35 U.S.C. § 119(a)–(d))

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)–(d) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(complete (d) or (e))

(d) ☐ no such applications have been filed.

(e) ☒ such applications have been filed as follows.

NOTE: Where item (c) is entered above and the International Application which designated the U.S. itself claimed priority check item (e), enter the details below and make the priority claim.

PRIOR FOREIGN/PCT APPLICATION(S) FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS APPLICATION AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. § 119(a)-(d)

COUNTRY (OR INDICATE IF PCT)	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 USC 119
Finland	973544	28 August 1997	☒ YES NO ☐
			☐ YES NO ☐
			☐ YES NO ☐
			☐ YES NO ☐
			☐ YES NO ☐

CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
(34 U.S.C. § 119(e))

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

PROVISIONAL APPLICATION NUMBER	FILING DATE
______ /______________________	______________
______ /______________________	______________
______ /______________________	______________

CLAIM FOR BENEFIT OF EARLIER US/PCT APPLICATION(S) UNDER 35 U.S.C. 120

☐ The claim for the benefit of any such applications are set forth in the attached ADDED PAGES TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR DIVISIONAL, CONTINUATION OR CONTINUATION-IN PART (C-I-P) APPLICATION.

ALL FOREIGN APPLICATION(S), *IF ANY*, FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

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POWER OF ATTORNEY

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

(list name and registration number)

Clarence A. Green (24,622)
Harry F. Smith (32,493)
Mark F. Harrington (31,686)

(check the following item, if applicable)

☐ Attached, as part of this declaration and power of attorney, is the authorization of the above-named attorney(s) to accept and follow instructions from my representative(s).

SEND CORRESPONDENCE TO

Clarence A. Green
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Fairfield, CT 06430

DIRECT TELEPHONE CALLS TO:
(Name and telephone number)

Clarence A. Green
(203) 259-1800

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

NOTE: Carefully indicate the family (or last) name, as it should appear on the filing receipt and all other documents.

Full name of sole or first inventor

Mika (GIVEN NAME) _____ (MIDDLE INITIAL OR NAME) Tarkiainen (FAMILY (OR LAST NAME))

Inventor's signature _____

Date August 7, 1998 **Country of Citizenship** Finland

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Full name of third joint inventor, if any

Ari (GIVEN NAME) _____ (MIDDLE INITIAL OR NAME) Riekki (FAMILY (OR LAST NAME))

Inventor's signature _____

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(check proper box(es) for any of the following added page(s) that form a part of this declaration)

☐ **Signature** for fourth and subsequent joint inventors. *Number of pages added* _____.

* * *

☐ **Signature** by administrator(trix), executor(trix) or legal representative for deceased or incapacitated inventor. *Number of pages added* _____.

* * *

☐ **Signature** for inventor who refuses to sign or cannot be reached by person authorized under 37 CFR 1.47. *Number of pages added* _____.

* * *

☐ Added page for **signature** by one joint inventor on behalf of deceased inventor(s) where legal representative cannot be appointed in time. (37 CFR 1.47)

* * *

☐ Added pages to combined declaration and power of attorney for divisional, continuation, or continuation-in-part (C-I-P) application.

☐ Number of pages added _____

* * *

☐ Authorization of attorney(s) to accept and follow instructions from representative.

* * *

(if no further pages form a part of this Declaration, then end this Declaration with this page and check the following item)

☒ This declaration ends with this page.

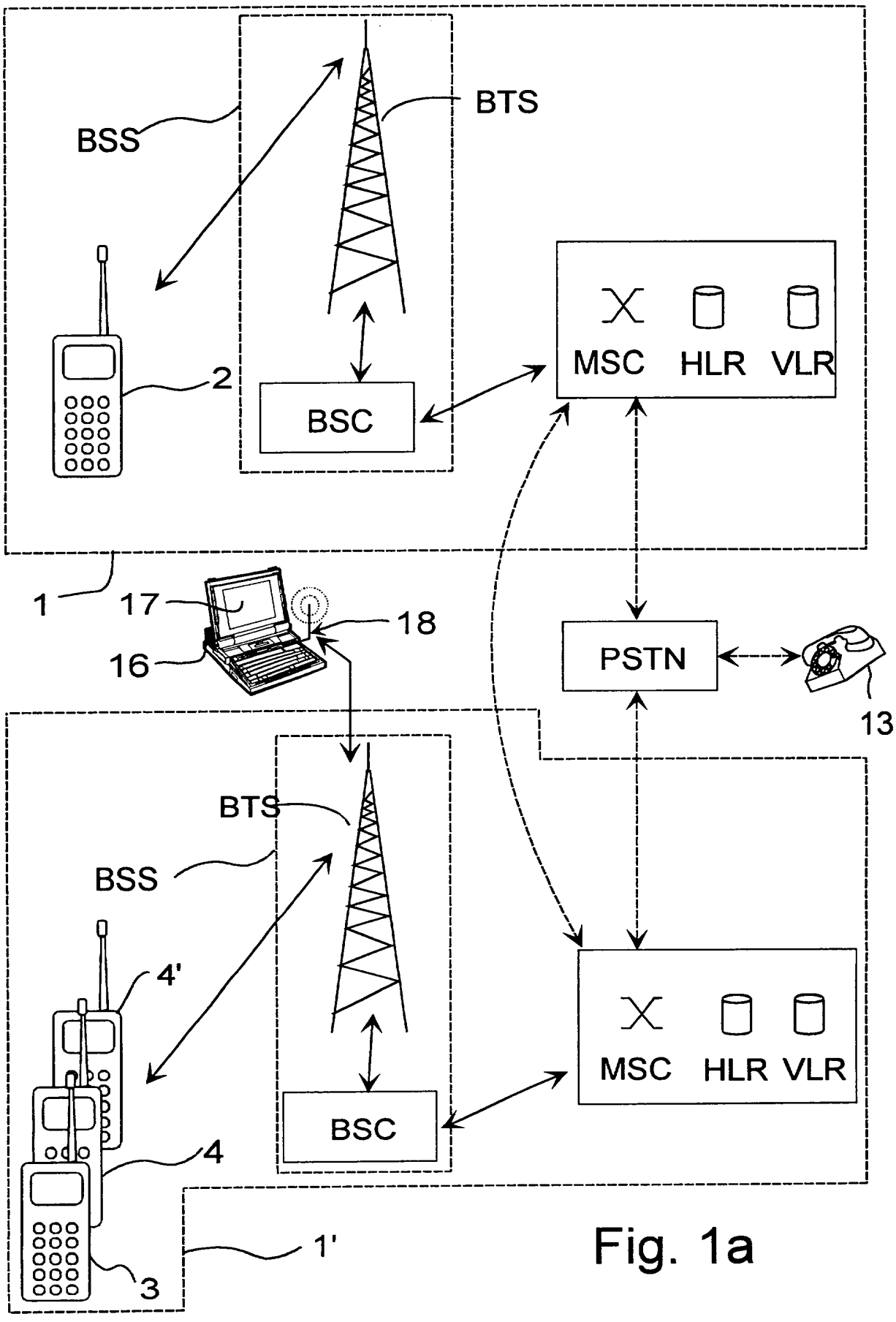
BSS
BTS
2
BSC
MSC
HLR
VLR
1
17
18
16
PSTN
13
BTS
BSS
4'
4
BSC
MSC
HLR
VLR
1'
3

Fig. 1a

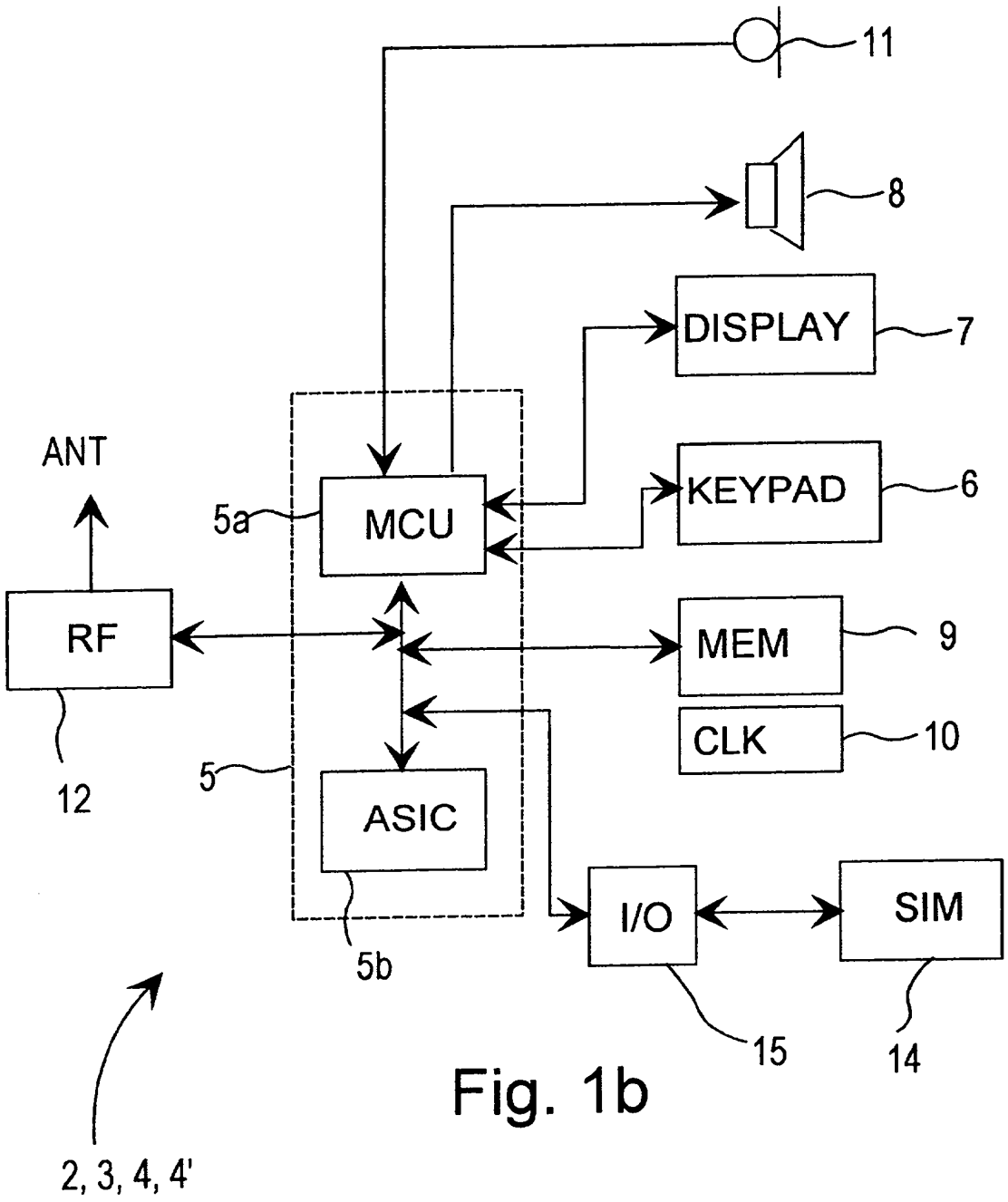
11
8
DISPLAY
7
ANT
5a
MCU
KEYPAD
6
RF
MEM
9
CLK
10
12
5
ASIC
I/O
SIM
5b
15
14
2, 3, 4, 4'

Fig. 1b

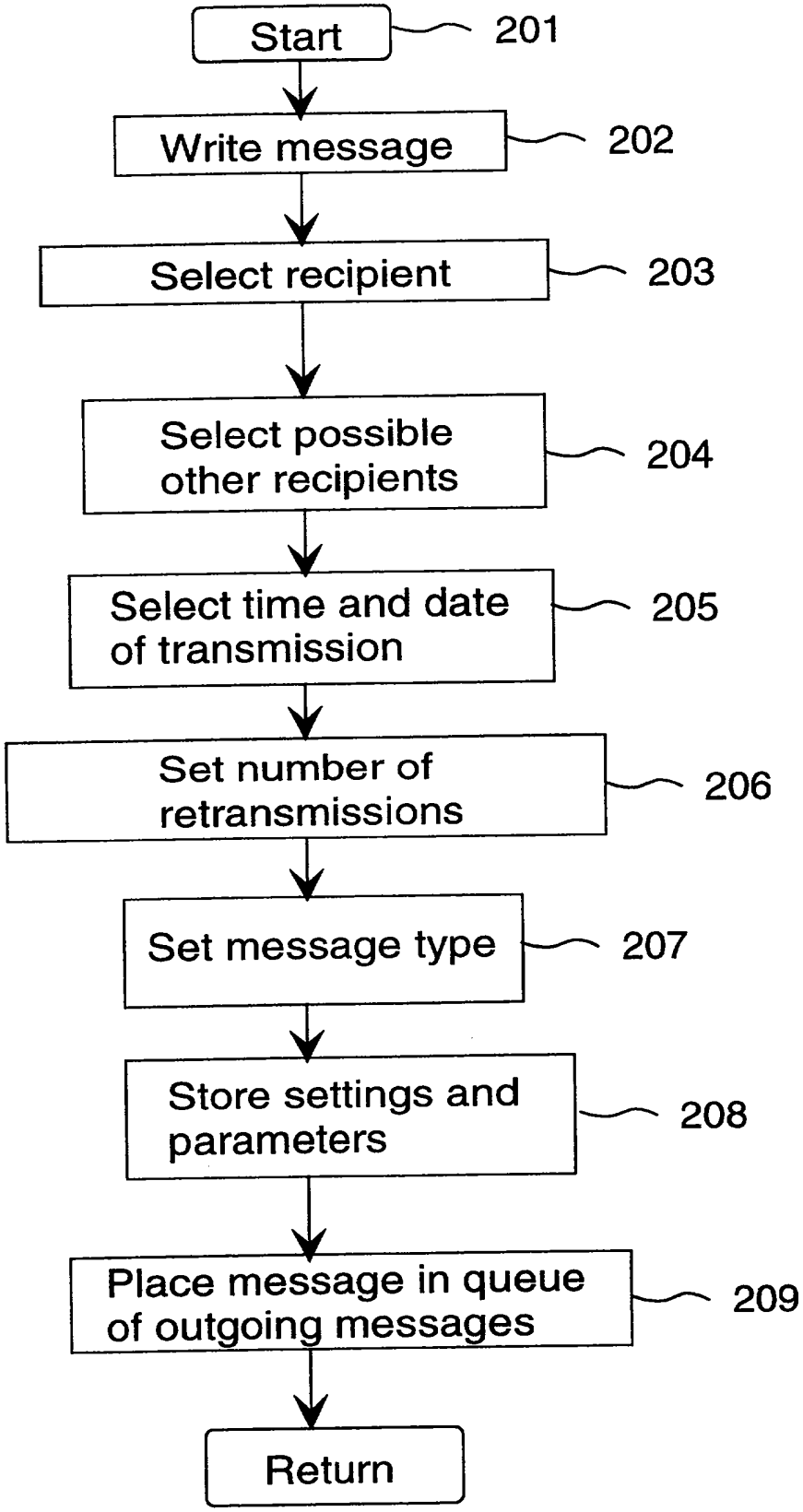
Start
201
Write message
202
Select recipient
203
Select possible other recipients
204
Select time and date of transmission
205
Set number of retransmissions
206
Set message type
207
Store settings and parameters
208
Place message in queue of outgoing messages
209
Return

Fig. 2

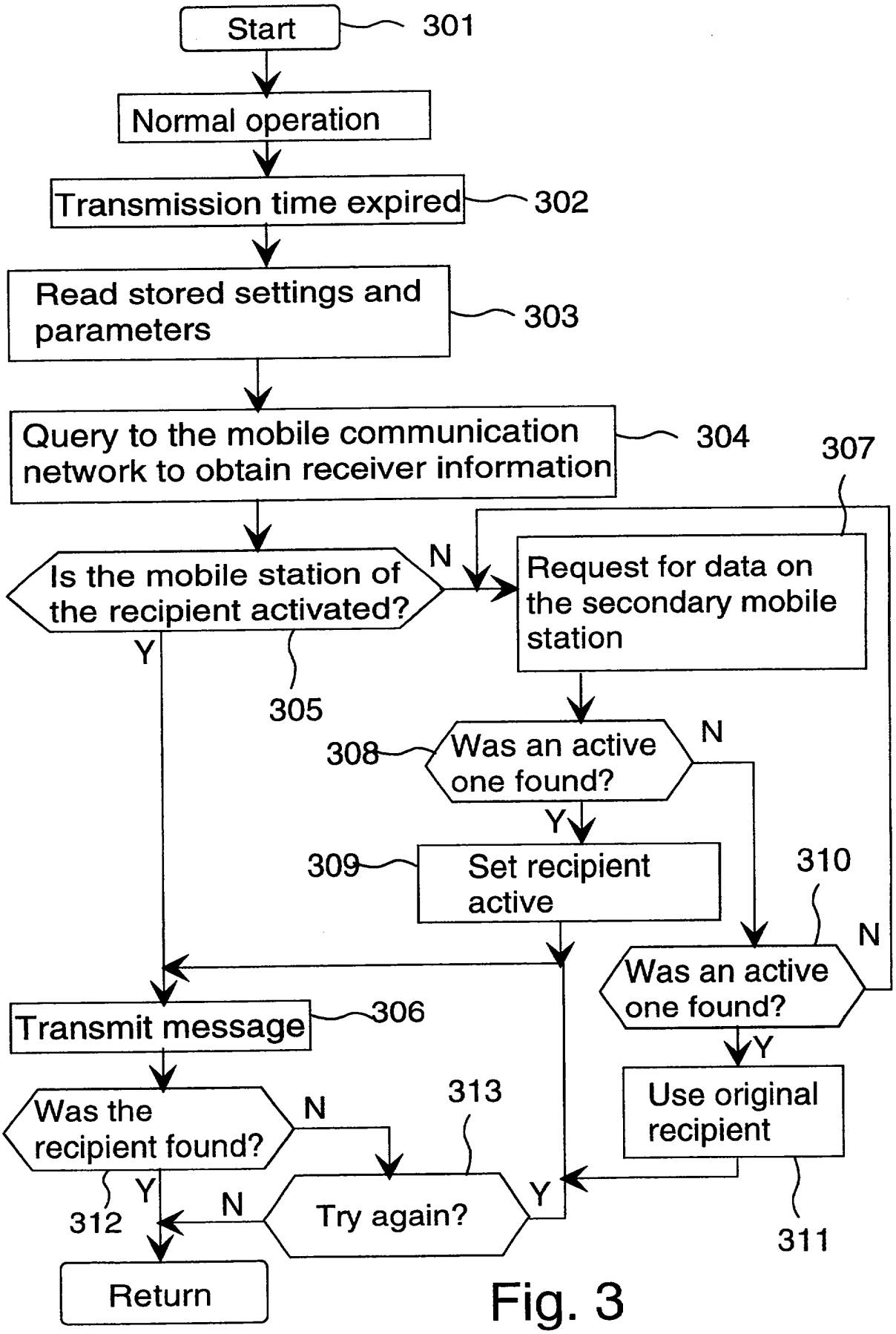
Start
301
Normal operation
Transmission time expired
302
Read stored settings and parameters
303
Query to the mobile communication network to obtain receiver information
304
307
Is the mobile station of the recipient activated?
N
Request for data on the secondary mobile station
Y
305
308
Was an active one found?
N
Y
309
Set recipient active
310
N
Was an active one found?
Transmit message
306
Y
Use original recipient
Was the recipient found?
N
313
Y
312
Y
N
Try again?
Y
311
Return

Fig. 3

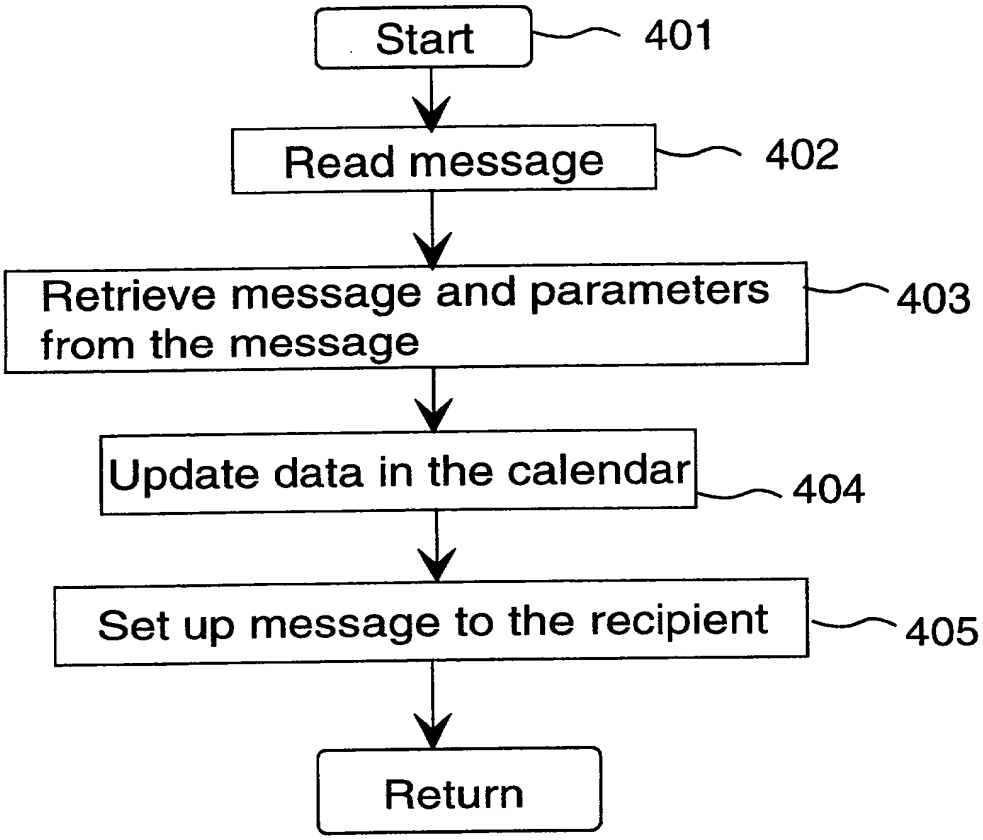
Start
401
Read message
402
Retrieve message and parameters from the message
403
Update data in the calendar
404
Set up message to the recipient
405
Return

Fig. 4

DECLARATION

The Undersigned, Certified Translator, duly examined and admitted by the Translators' Examination Board to certify translations from Finnish to English, solemnly declares hereby that the attached documents in English are true and faithful translations of the Finnish Patent Application No. 973544 originally filed with the Finnish Patent Office on 28 August 1997 in the name of Nokia Mobile Phones Ltd.

And I make this solemn declaration conscientiously believing it to be true.

Tampere, Finland, 24 July 1998

VIRALLINEN KÄÄNTÄJÄ
TUULIKKI TULIVIRTA
CERTIFIED TRANSLATOR

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IN THE UNITED STATE PATENT AND TRADEMARK OFFICE

Express Mail No. EL067095495US

In re Application of : TARKIAINEN et al.

SERIAL NUMBER: EXAMINER:

FILING DATE: Herewith ART UNIT:

TITLE: METHOD FOR THE TRANSMISSION OF MESSAGES

ATTORNEY DOCKET NO.: 466-008195-US(PAR)

The Commissioner of Patents and Trademarks

Washington, D. C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the above-identified, enclosed patent application as follows:

IN THE CLAIMS:

Please amend Claims 3, 4, 5 and 8 as shown below.

Claim 3, line 1, delete "or 2".

Claim 4, line 1, delete "any of the claims 1 to 3" and insert --claim 1--.

Claim 5, line 1, delete "any of the claims 1 to 4" and insert --claim 1--.

Claim 8, line 1, delete "or 7".

REMARKS

Prior to calculation of the fees, please enter this preliminary amendment.

Respectfully submitted,

____________________ 21 Aug 98
Clarence A. Green, Reg. No. 24,622 **Date**

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